

# Growth Trends in the Economy

**T**HE American economy in the past 50 years has shown a remarkably persistent rate of growth. This long-term characteristic is best reflected by the course of the Nation's total production of goods and services, which has increased at an average rate of about 3 percent per year.

Indeed, since 1940 the rise in total output has been even faster—averaging 5 percent per year. This more rapid expansion represents the gains made from the immediate prewar years—when unemployment was substantial and total production was below the long-term trend—to the high activity period of recent years.

It is, of course, true that the long-term growth of the economy has been interrupted periodically by cyclical declines in business activity of varying amplitudes and duration. But each period of decline has been followed by a period of recovery which eventually brought total production to a new high.

Furthermore, in every period some industries and products have shown exceptionally rapid production growth and their activities have contributed to the general upswing or have helped to restrict the decline. The bulk of American industry, however, cannot be classified as fast-growing, though many old-established industries have expanded and become vigorous through aggressive marketing and forward-looking programs.

It is the purpose of this study to illustrate the wide divergences among industries and products in trends of output from the immediate prewar period to the present. Particular emphasis will be given to delineating the characteristics of the new fast-growing industries and products and to illustrating the trends in the old-established industries which have continued to expand at a rapid pace.

The output of most industries in the postwar period has been greatly in excess of prewar rates. This was associated with population growth, much higher purchasing power, and hence greater demand for all types of goods and services, and with the very heavy investment in plant and equipment which brought substantial additions to the capacity to produce.

In this favorable economic climate, the output of many industries and products has, however, shown exceptionally rapid growth. These include a host of relatively new products, such as the "miracle" drugs and synthetic fibers, as well as a number of old-established ones, such as electric power and cigarettes.

To further the development and marketing of new products, many firms are allocating an increasing proportion of their budget to industrial and scientific research and to product testing. In 1951, for example, direct outlays for such purposes by industry amounted to \$1.2 billion; in addition, nearly another \$1.5 billion was spent through Government-supported programs. This represents a substantial increase in expenditures for these purposes over the prewar rates. Thus, a steady flow of new discoveries can be depended upon and the associated work toward their application is rapidly being expanded.

As in the past, the fruits of industrial and scientific research can be counted upon to contribute importantly to the Nation's growth in the period ahead. Also, the marketing of new products and improvement in the quality of old have resulted in real benefits to both producers and consumers.

Newly developed products display a variety of patterns in their market-life. Some do not seem to "catch on" and after an ephemeral life disappear from the market place. Others go through a rapidly growing phase after which the rate of growth diminishes. Still others maintain a strong growth over a long period of years, with no apparent diminution in the demand. Illustrations of divergent experiences covering the period of the last decade are shown in the chart.

For the new products which are successfully launched, rising demands are accompanied by expansion in investment—in new plant and equipment and in inventories. As the demand catches up and exceeds the supply, new plants are built to increase the capacity to produce. The favorable demand and profit prospects in the new lines provide inducements for business entries into the new product field both in the production and distribution sectors. They further provide incentives for existing firms to add the new lines to complement their old ones. Many established companies have thus expanded by developing entirely new lines, in addition to improving the quality of their existing products and finding new and broadened markets for regular line products.

Consumers also benefit from the marketing of new or better quality products which add to the variety and enjoyment of available goods and services. The benefits increase as the efficiencies of rising production are passed on in lower prices, as has been demonstrated in many cases in recent years.

In view of the rapidity with which new products have been introduced in the recent period, and the fact that the demand for many of them is still in the expanding phase, it appears that, in the aggregate, they will continue to contribute importantly to total business activity in the near-term future.

## *Divergence in trends of output*

To illustrate the diversity of the production trends, data have been collected on specific industries and products, going back to 1900 where possible. Altogether, over 160 series were compiled. These are listed in an accompanying table.

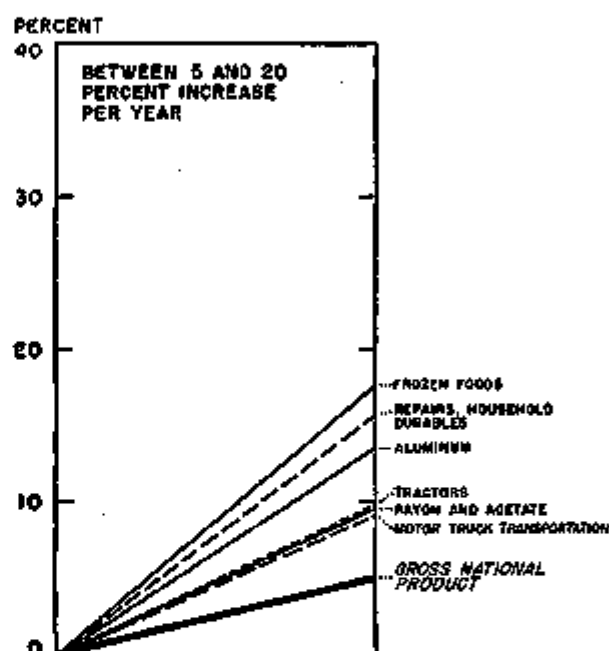
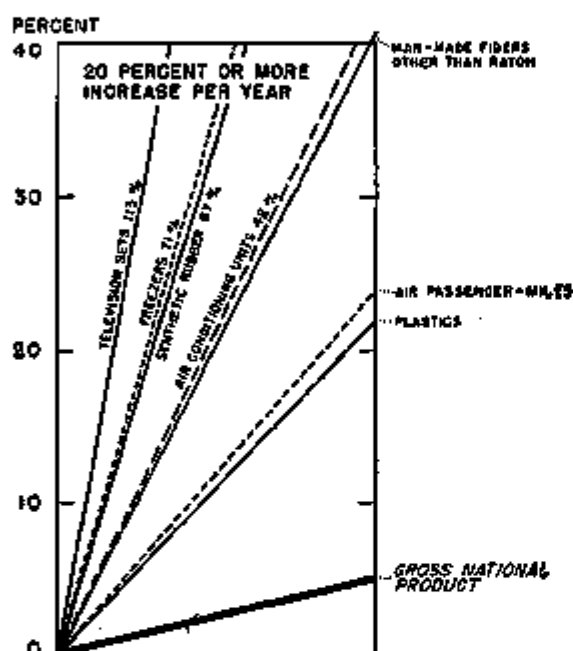
It should be emphasized that the list is only a partial one. The particular items included serve to exemplify the wide range and character of recent production trends, with special emphasis on the growth rates of products which have been recently introduced and on the established fast-growing industries. Many industries and products, because of lack of data or for other reasons, have not been included.

Because of the partial nature of the list, it excludes many items which are well known to be new and growing; it also excludes other items which have shown declining tendencies. For example, industrial applications of electronic devices and measuring and controlling instruments have made great strides in recent years. The growth in the use of these and other types of machines has been due in part to the greater accuracy of operations, better quality control, and to the

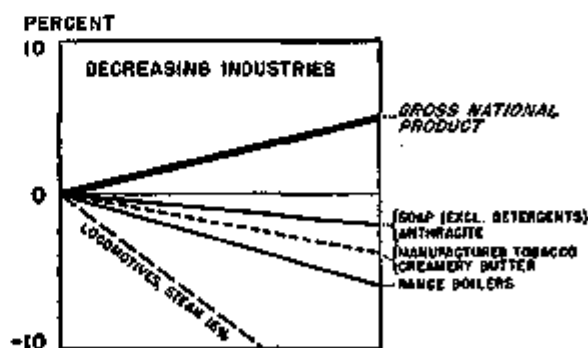
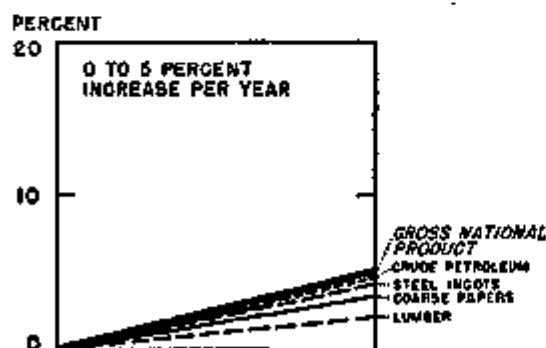
NOTE.—MR. PARADISO IS THE OFFICE OF BUSINESS ECONOMICS' CHIEF STATISTICIAN AND ASSISTANT DIRECTOR; MR. HIRT IS A MEMBER OF THE CURRENT BUSINESS ANALYSIS UNIT OF THE OFFICE OF BUSINESS ECONOMICS.

## Illustrations of production changes from 1940 to 1951 compared with the increase in total national output

Many industries or products have increased at a faster annual rate than total output . . .



while others have increased at a slower rate or declined



cost-reduction possibilities which are offered by such new products. It has not been possible to examine the growth trends in many of these areas primarily because of lack of data.

In general, a number of basic characteristics were noted in the evaluation of the production movement of the selected industries or products.

1. Some industries—such as cigarettes, electric power, telephone service, and motor truck transportation—continue to be fast-growing over long periods and are only moderately affected by business fluctuations.

2. Other industries show a very substantial response to depression and recovery forces but, after allowance for the influences of these forces, maintain a net upward growth. Examples of these industries are washing machines, electric ranges, aluminum, and paper.

3. Some other industries go through a period of very rapid growth in their early stages of development, after which the rise in production and demand moderates; in some of these cases output may eventually stabilize or even decline. Examples of these latter industries are lumber and anthracite, where the long-term trends have been downward since the early twenties.

4. Many industries have been in production only in recent years and, consequently, are still in the phase of very rapid development.

### *Basis of classification*

The selected industries have been classified in three broad groups—fast-growing, moderately or slowly growing, and declining, on the basis of their experience since 1940.

Most industries have shown very substantial growth since 1940, but much of this growth has been associated with the increase in total economic activity during this period. Consequently, in classifying the industries on the basis of their rates of growth or decline, it was necessary to take account of the effect of the growth of the total economy upon the trend of the particular industry.

A number of methods can be used to derive the "true" trend, but in the final analysis the particular method selected must rest, to some degree, on judgment. The classification shown in the list was based on the simplest possible approach to determine the trend—namely, the average annual rate of change from 1940 to 1951.

As already indicated, the total physical output of the Nation increased in this period by an average rate of 5 percent per year. An arbitrary selection of the rapidly growing industries was made by including in the first group of the list only those items which had an average rate of increase of 7½ percent or more per year; in other words, those which had increased by at least half again as much as total output over this period.

The middle group includes a selection of moderately and slowly growing industries—those having an average annual rate of increase from 0 to 7½ percent. The lower group includes industries showing actual declines in the period selected.

Other methods of determining the trends and classifying the items, such as by least squares trend analysis or by a combination of trend and cyclical considerations, would produce different classifications. However, in any case, a majority of the items would fall within the groupings shown in the table.

The table shows the actual production for the years 1940, 1948, 1951, and 1952 (preliminary); also presented is the average annual rate of change for the period 1940 to 1951. A

typical representation of the variety of trends over this period is portrayed in the chart.

### *New and old products show fast growth*

The group of fast-growing industries includes 60-odd items. The value of output of these goods and services, although the list is incomplete, is large—over \$40 billion in 1951, or four times that of 1940.

Among the fast-growing industries are included both newly-developed industries of the past dozen years and the old ones which are still rapidly expanding. These industries cover all categories of durability—nondurables, durables, and services. Such fast-growing products as television sets, freezers, and clothes dryers are examples of consumer hard goods. Antibiotics and frozen foods are typical of the consumer nondurable goods group. Diesel locomotives and truck trailers are illustrative of producers' durables. Such items as synthetic rubber and man-made fibers illustrate the raw and semi-finished materials, while electric power and air transportation exemplify the services.

Over one-third of the items in the fast-growing group are new products; the remainder comprises old-established products which have continued to grow rapidly in the past decade.

For the 60-odd products which are included in the fast-growing group, the weighted average increase has been 10 percent per year, with the rate of growth per year ranging from 7½ percent for washing machines to over 100 percent for antibiotics.

No attempt is made here to forecast the course of the fast-growing industries in the next several years; nor has any attempt been made to predict the new markets which might eventuate in the future as a result of new discoveries and applications.

Other sectors in which rapid expansion is indicated—particularly those influenced by such factors as the increase in the population and in the number of cars in use—are outside the scope of this analysis. Such growth possibilities would extend to the large demand for school teachers, schools, community facilities associated with growing suburban areas, and the expansion of the Nation's highway system.

### *Relation of growth industries to cycle*

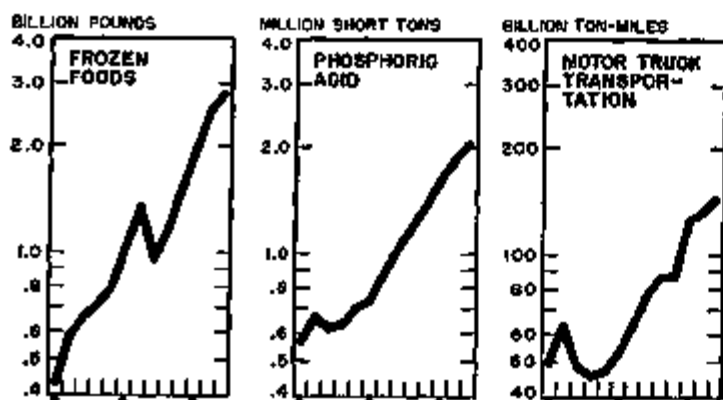
Past experience has indicated that, in general, the output of durable goods items has responded more markedly to business fluctuations than that of nondurables and services. For a comparatively new durable product, however, the growth forces have usually been more dominant, and a severe decline in business activity has tended to interrupt growth only temporarily. Among the new nondurable goods and services the growth has continued even under moderately adverse general business conditions. Thus, a general business decline would affect the demand for the fast-growing items in varying degrees, with the pattern of change being more moderate than that of the old-established products.

It should be noted that in 1951 and continuing through part of 1952, the output of some industries declined from 1950 even though total business activity continued upward. This was particularly true of many of the consumer durable products, including some relatively new items which had been fast-growing in the prior years.

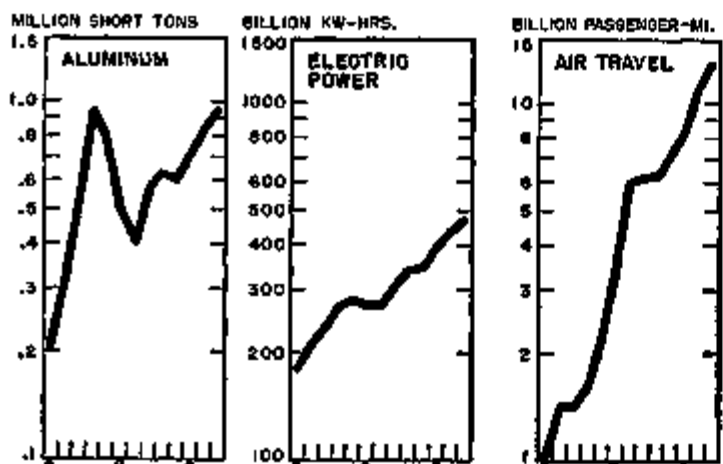
The 1951-52 reduced rates of output in these cases were associated with a number of special and temporary developments which followed the outbreak of hostilities in Korea in 1950. Among numerous other factors, these included the two buying waves following Korea; the imposition of credit controls; the diversion of many resources for military use;

## Growth rates in output have varied among the fast growing industries

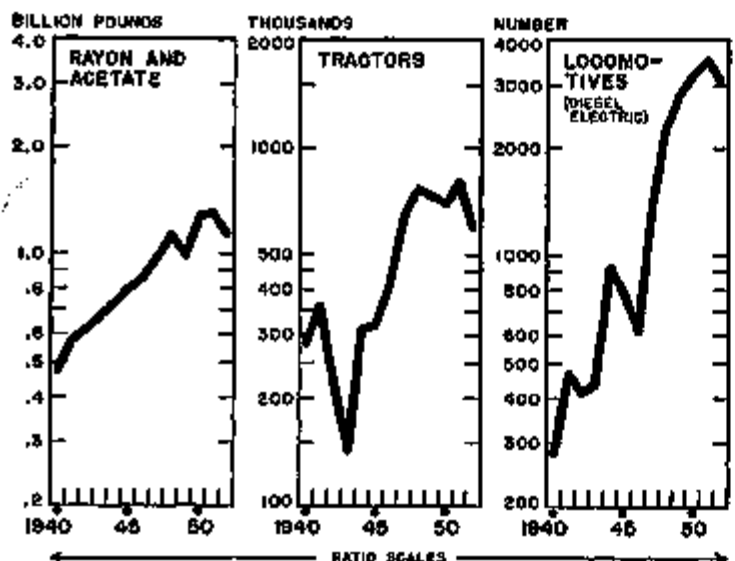
Since 1948 these industries have exceeded their 1940-51 average rate of growth . . .



these have maintained the rate . . .



while these have slowed down



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52-174

and the uncertainties with respect to price movements. These factors had the effect of slowing down consumer purchases of many items relative to the level and direction of income. In the last half of 1952 production of most of these items was moving upward again as a result of the gradual wearing out of the effects of the buying waves and the more favorable development of the other factors.

## Most industries grow moderately or slowly

Practically all of the moderately- or slowly-growing products shown in the list—those which increased by less than 7½ percent—are old-established. These include a wide range of goods and services with long established uses both for industrial and consumer purposes and comprise the major output of American industry. Some of the products which have grown at a slower rate than the national average growth are those which usually in the past have been relatively insensitive to changes in aggregate demand. Examples of these are salt, shoes, flour, soap, tobacco, and condensed milk.

Even in this period of substantial general economic growth of the past decade, the output of some industries and products has shown declining tendencies. The table lists 17 of these cases. There are a number of reasons for these declining trends. Substitutions of products by more efficient, better quality or cheaper items have been important considerations in many cases; examples of these items are steam locomotives, which have been mostly displaced by the diesels; anthracite, which has been steadily losing out to competing fuels; and soap, which has declined as a result of some considerable replacement by the detergents. In other cases consumer tastes have changed with consequent shifts to other products. Thus, tastes have shifted from pipe smoking toward wider use of cigarettes, with the result that a decline has taken place in the output of manufactured tobacco.

## Contribution to economic activity

Of special interest is the impact of rapidly-growing products on the economy. As already indicated, the development and marketing of these products involve considerable outlays for new plant and equipment. In a special survey recently conducted by the Department of Commerce, many companies indicated their intentions to add to capacity for their production. While it is not possible to derive an over-all total for the amount of such investment, nevertheless, such expansion would provide some offset to declines which may occur elsewhere in the economy.

It should not be implied that the sales associated with the fast-growing products represent in all cases a net addition to the total activity of the industry concerned. Some of these products are directly competitive with established products; man-made fibers are an example where not all of the sales represent a net amount of new business for the textile industry as a whole. Even in such cases the development of new products leads to additional investment in plant and equipment. On the other hand, many new products marketed in recent years are not directly competitive with old-established ones and hence provide a net addition.

## Illustrations of Rapid Growth

In view of the divergent characteristics of growth industries, it is of interest to examine a few cases briefly to bring out the nature of the expansion and the problems involved.

Table 1.—Production Trends of Selected Industries and Products in the Period 1940 to 1951

Product or service	Unit	Average annual rate of growth 1940-51, percent	Production			
			1940	1945	1951	1952 (preliminary)
Readily Growing Industries—Increases at an Average Annual Rate of 7½ Percent or More						
Antibiotics	Thous. lbs.	118.0	(1)	243	1,280	1,400
Television sets	Thous.	113.2	1	288	5,385	6,000
Freezers, farm and home	Thous.	71.0	(1)	609	1,060	1,140
Dryers, clothes	Thous.	70.9	(1)	98	482	530
Synthetic rubber, all types	Thous. lg. tons.	67.6	3	489	849	800
Air ton-miles flown	Mil. ton-mi.	46.6	3	174	219	230
Air conditioning units, room	Thous.	42.0	(1)	113	232	225
Synthetic detergents (soap)	1940-100	41.4	100	2,000	4,300	n. a.
Man-made fibers, other than rayon	Mil. lbs.	40.6	0	75	310	272
Disposals, waste, food	Thous.	35.3	(1)	175	323	225
Blankets, electric	Thous.	30.1	(1)	675	778	830
Locomotives, Diesel-electric, installations, Class I railroads	Units.	25.0	281	2,254	3,480	3,100
Revenue passenger-miles flown	Bil.	23.6	1	0	11	13
Plastics and resin materials	Mil. lbs.	21.6	277	1,485	2,481	2,800
Dishwashers	Thous.	21.4	(1)	225	200	210
Magnesium	Thous. sh. tons.	19.4	0	30	41	102
Concrete blocks	Mil. blocks	18.3	263	1,300	1,850	1,400
Frozen foods	Mil. lbs.	17.6	431	1,163	2,644	2,800
Warm-air furnaces, oil and gas	Thous.	17.5	123	870	735	820
Nitric acid	Thous. sh. tons.	16.7	347	1,183	1,495	1,470
Trailer coaches, housing type	Thous.	15.7	112	55	67	84
Refrigerator household domestic	1940-100	15.7	100	1,119	497	n. a.
Ammonia, synthetic, anhydrous	Thous. sh. tons.	15.7	368	1,090	1,772	2,025
Kitchen cabinets, steel	Thous.	14.7	(1)	3,230	2,672	2,970
Acetic anhydride	Mil. lbs.	14.2	225	776	872	946
Water heaters, electric and gas	Thous.	13.7	670	1,490	2,783	2,080
Methanol, synthetic	Mil. gal.	13.7	95	139	194	162
Aluminum, primary, ingots	Thous. sh. tons.	13.6	200	624	987	940
Chlorine gas	Thous. sh. tons.	13.2	440	1,440	3,611	2,580
Industrial trucks and tractors, electric	Units	13.0	1,710	2,438	6,625	7,300
Hydrochloric acid	Thous. sh. tons.	12.1	194	458	680	600
Canned juices, fruit	Mil. lbs.	12.0	609	2,630	2,440	2,000
Phosphoric acid	Thous. sh. tons.	11.4	508	1,194	1,847	2,027
Oleum, sulfuric	Mil. lbs.	11.3	820	308	1,030	1,230
Coatings and dyes	1940-100	11.0	100	303	315	322
Ranges, electric	Thous.	10.9	480	1,600	1,400	1,000
Gypsum board, including lath	Mil. sq. ft.	10.0	2,031	6,213	6,130	4,800
Tractors, all types	Thous.	9.8	234	184	794	800
Natural gas	Bil. cu. ft.	9.7	2,000	4,148	7,000	8,103
Rayon and acetate	Mil. lbs.	9.6	471	1,124	1,294	1,190
Acetic acid, synthetic and natural	Mil. lbs.	9.5	174	422	470	373
Motor truck transportation	Bil. ton-mi.	9.1	40	87	181	143
Oil burners, residential	Thous.	9.1	204	420	694	770
Sodium hydroxide	Thous. sh. tons.	8.9	1,915	2,877	3,100	3,020
Truck trailers	Thous.	8.7	27	46	67	70
Hardwood plywood	Mil. sq. ft.	8.0	1,300	1,934	2,805	2,000
Calcium oxide	Thous. sh. tons.	8.0	814	483	775	680
Shavers, electric	Thous.	8.6	000	1,640	2,300	2,450
Fertilizers, commercial	Mil. sh. tons.	8.3	6	18	21	23
Electric power, utilities and industrial	Bil. KW-hr.	8.2	180	837	483	483
Sulfuric acid	Mil. sh. tons.	8.2	0	12	13	13
Telephone service	1940-100	8.2	100	186	238	267
Domestic water systems	Thous.	8.2	259	689	647	680
Calced gypsum	Thous. sh. tons.	7.7	3,203	5,219	7,477	6,520
Refrigerator passenger cars and trucks	1940-100	7.0	100	239	225	245
Cigarettes	Bil.	7.0	180	387	419	430
Motor coaches, rental units	1940-100	7.0	100	100	225	n. a.
Asphalt	Thous. sh. tons.	7.0	5,847	3,449	12,065	13,800
Paperboard, incl. wet and building board	Thous. sh. tons.	7.6	6,270	10,779	18,038	15,300
Washing machines	Thous.	7.0	1,583	4,317	3,373	3,100
Moderately or Slowly Growing Industries—Increases of Less Than 7½ Percent						
Shipping containers	Mil. sq. ft.	7.3	30	63	78	74
Glass containers	Mil. gross	7.3	56	69	118	119
Truck and bus tires	Mil.	7.3	9	19	18	15
Clocks, electric	Thous.	7.1	3,600	9,964	7,500	4,700
Bookpapers	Thous. sh. tons.	7.1	1,055	3,181	3,530	3,580
Bath tubs	Thous.	7.0	973	1,947	2,051	1,700
Acetylsalicylic acid (aspirin)	Mil. lbs.	7.0	0	11	13	13
Denatured alcohol	Mil. wine gal.	6.7	134	107	273	234
Vacuum cleaners	Thous.	6.7	1,241	3,301	2,720	2,540
Tissue paper	Thous. sh. tons.	6.0	734	1,188	1,482	1,200
Water closets	Thous.	6.4	2,036	3,406	4,025	3,000
Waste paper	Thous. sh. tons.	6.8	4,709	7,000	6,100	7,800
Sulphur, crude	Thous. lg. tons.	6.2	2,728	4,809	5,278	5,292
Oak flooring	Mil. bd. ft.	6.2	511	832	887	691
Palisade construction	Mil. cords	6.2	14	21	27	37
Cement, Portland	Mil. barrels	6.0	130	203	240	280
Woodpulp	Mil. sh. tons.	6.0	9	13	17	19
Trucks and buses	Thous.	5.9	755	1,370	1,430	1,200
Fuel oil, distilled and residuum	Mil. barrels	5.9	640	847	945	873
Motor fuel	Mil. barrels	5.8	617	922	1,140	1,185
Rubber consumption, all types	Thous. lg. tons.	5.8	651	1,009	1,213	1,250
Fine papers	Thous. sh. tons.	5.8	738	1,141	1,303	1,330
Extrudes	Mil. barrels	5.7	74	122	130	130
Ethyl alcohol	Mil. proof gal.	6.0	2,053	3,333	3,583	4,222
Lavatories	Thous.	6.8	12,093	2,333	3,583	2,700
Kitchen sinks	Thous.	6.0	1,260	2,711	2,002	1,900
Moderately or Slowly Growing Industries—Increases of Less Than 7½ Percent—Con.						
Asphalt prepared roofing	Mil. sq.	5.0	33	60	89	80
Lamps, electric, all types	Mil.	5.4	1,115	1,537	2,012	1,838
Industrial explosives	Mil. lbs.	4.3	407	672	720	722
Canned fruits	Mil. lbs.	4.3	1,777	2,536	3,144	2,900
Ice cream	Mil. lbs.	4.2	1,426	2,581	2,013	2,700
Plastic clay sewer pipe	Thous. sh. tons.	4.2	901	1,490	1,075	1,080
Cast iron pressure pipe and fittings	Thous. sh. tons.	3.2	848	1,150	1,475	1,100
Cast iron soil pipe and fittings	Thous. sh. tons.	3.1	397	543	689	670
Refrigerator freight containers	Bil.	3.0	376	543	642	610
Canned vegetables	Mil. lbs.	3.0	4,525	4,767	7,770	6,400
Lubricating oil	Mil. barrels	2.8	37	61	82	87
Salt	Mil. sh. tons.	2.8	10	16	18	n. a.
Crude petroleum	Mil. barrels	2.7	1,333	2,320	2,264	2,250
Soda ash	Thous. sh. tons.	2.7	3,000	4,573	4,094	4,250
Tires, electric	Thous.	2.6	1,788	3,793	5,334	2,685
Formulated milk liquors	Mil. barrels	2.6	45	81	98	90
Toasters, electric	Thous.	2.3	2,307	4,620	3,733	2,982
Refrigerators, electric	Thous.	2.3	170	477	284	298
Brick, landscape	Mil. sh. tons.	2.3	4,070	3,442	4,471	4,800
Refrigerators, electric	Thous.	2.2	2,000	4,040	3,075	3,670
Steel ingots and steel for castings	Mil. sh. tons.	2.2	67	89	104	93
Newspaper consumption	Thous. sh. tons.	2.2	2,858	4,040	4,011	4,665
Heating pads, electric	Thous.	2.1	932	1,600	1,450	1,620
Automotive replacement batteries	Mil.	2.0	14	25	28	22
Heating stoves, domestic	Thous.	2.0	2,463	5,227	4,193	3,000
Railroad freight cars, total	Thous.	2.0	64	115	80	77
Coffee makers, electric	Thous.	1.8	1,873	2,790	2,623	2,650
Zinc, new supply	Thous. sh. tons.	1.7	694	581	1,020	1,060
Cheese	Mil. lbs.	1.6	785	1,007	1,161	1,185
Iron, electric	Thous.	1.5	4,171	7,300	7,830	8,125
Refrigerator passenger railcars	Bil.	1.5	25	41	55	55
Passenger automobiles	Thous.	1.4	3,717	3,006	5,337	4,250
Coarse papers	Thous. sh. tons.	1.4	2,601	2,627	3,497	3,210
Wire mills and slacks	Thous. sh. tons.	1.3	641	980	863	874
Cooking stoves, gas	Thous.	2.8	1,742	2,788	3,350	2,390
Coats, women's, misses' and juniors'	Mil.	2.7	117	38	24	25
Passenger car tires	Mil.	2.3	51	67	60	73
Lead	Mil. lbs.	2.1	1,388	3,321	2,894	2,820
Beef	Mil. lbs.	2.0	2,175	4,075	3,843	4,000
Raw cotton, consumption	Mil. lbs.	1.9	3,960	4,463	4,261	4,460
Turpentine	Thous. barrels	1.9	600	680	607	604
Ethyl acetate	Mil. lbs.	1.9	75	67	62	73
Resin	Thous. drums	1.8	1,717	2,000	2,040	1,770
Dresses, women's, misses' and juniors'	Mil.	1.7	104	227	256	250
Lumber, total	Bil. bd. feet	1.7	31	37	37	37
Condensed and evaporated milk	Mil. lbs.	1.5	2,721	3,321	3,321	2,988
Wool, raw, apparel and carpet consumption	Mil. lbs.	1.5	408	403	470	400
Structural steel	Thous. sh. tons.	1.5	1,035	1,283	1,217	980
Bituminous coal	Mil. sh. tons.	1.4	401	600	634	480
Shoes and slippers	Mil. pr.	1.4	494	492	470	508
Pork, cured and salted	Mil. lbs.	1.3	10,044	10,251	11,483	11,200
Hosiery, all types	Mil. doz. pr.	1.3	135	147	155	163
Flour, wheat	Mil. barrels	1.2	103	142	117	116
Sugar, total	Thous. sh. tons.	1.2	6,968	6,671	7,085	7,860
Newspaper production	Thous. sh. tons.	1.0	1,015	867	1,225	1,145
Aluminum, refined	Mil. lbs.	0.9	71	83	77	82
Railroad passenger cars	Units	0.8	382	440	311	116
Carpets and rugs, wool type	Mil. sq. yds.	0.8	25	30	41	63
Veal	Mil. lbs.	0.7	561	1,423	1,091	1,100
Radios	Mil.	0.6	12	17	13	10
Copper, refined, new supply	Thous. sh. tons.	0.4	1,382	1,857	1,445	1,506
Cigars	Bil.	0.3	4	0	0	0
Industries Showing Declining Trends						
Overcoats and topcoats, men's	Thous.	-0.2	5,614	6,104	5,540	5,200
Suits, men's	Mil.	-1.0	25	24	20	10
Soap, excl. synthetic detergents	1940-100	-2.0	100	106	81	n. a.
Antibiotics	Mil. sh. tons.	-2.0	62	67	43	30
Cast-iron boilers	Mil. lbs.	-2.7	283	263	210	214
Manufactured tobacco	Mil. lbs.	-3.4	344	344	250	233
Creamery butter	Mil. lbs.	-3.8	2,240	1,412	1,475	1,400
Lamb and mutton	Mil. lbs.	-4.6	878	747	522	600
Hand and windmill pumps	Thous.	-4.8	481	457	240	240
Radiators and convectors	Mil. sq. ft.	-5.2	77	60	43	37
Range boilers	Thous.	-5.0	868			

n. a. Not available.

1. Production was relatively small; annual rate of growth covers the postwar years.  
 2. Production data for trailer coaches, heating stoves and wearing apparel except hosiery and footwear are for 1939; for lavatories, 1941; and for kitchen sinks, 1937. Rate of growth for these items is based on years indicated.

Source: U. S. Department of Commerce, Office of Business Economics, based upon basic data obtained from private and Government sources.

### *Chemicals generally rapidly growing*

The output of the chemical industry has risen continuously since the early twenties. Since 1929 production has grown at an average rate of 10 percent a year. The only significant exception to the upward trend was from 1930 to 1932, and even then the decline was much less than in other segments, and the recovery more rapid. Its greatest period of expansion occurred during and following the last war when the special demands called for the development of entirely new products and greatly increased output of regular line items. These favorable trends are still continuing.

Both of the major segments of the chemical industry—organic and inorganic chemicals—have participated in the rapid expansion of output in the past 25 years. The organic group, where the development of new products has been especially noteworthy, has shown a rate of growth of output of 12 percent a year, as compared with 6 percent for inorganics.

Much of the growth of the industry has been due to the development of new products, such as plastics, synthetic fibers, detergents, and antibiotics. Many well-established basic chemicals, including sulphur, phosphates, and acids, have also expanded but at a slower rate than the new lines. Because in many cases new chemicals were cheaper, or more suitable, or of better quality, they have replaced other products in many manufacturing processes. Plastics, for example, are now being used as an alternative to metals and wood in many items. Synthetic fibers—first rayon and acetate and more recently nylon, orlon, dacron, dynel, and vicara, and others which had barely dented the textile market a decade ago—are now supplementing the natural fibers.

These dynamic developments are being accompanied by large expansion programs to increase the capacity to produce various types of chemicals. Expansion goals have been announced by the Defense Production Administration for 43 important chemical materials. The total capital expansion program scheduled for completion within the next several years is expected to increase the output of the industry by more than 50 percent over that of the early part of 1951.

### *Electric power also growing rapidly*

Electric power output has been growing three times as fast as the average for all industries, or close to 10 percent annually since 1900. This is a case where the growth has been persistent. Since 1940 it has been stimulated by the rapid growth of atomic energy and the marked expansion of aluminum production, both requiring large amounts of electric power.

Keeping pace with the strong demand for power is the capital investment in new plant and equipment. Since the end of the war, private utility companies have spent more than \$10 billion for the construction of new facilities. Present plans call for an additional expenditure of \$8 billion to boost 1954 generating capacity by nearly a third over 1951.

### *Air transportation*

Although small, the air transportation industry has grown at an average annual rate of nearly 25 percent per year in the past decade. Accompanying this growth has been the expansion of operating facilities of the scheduled airlines. In a recent report the Civil Aeronautics Administration estimated that airline passenger traffic will reach 40 million airline passengers by 1960, or about two-thirds again as large as the 1952 volume. This in turn will involve the construction of additional planes and airports and will provide air service to an increasing number of communities.

### *Varying patterns in the textile industry*

In contrast to the foregoing industries which have shown general growth in total and in the most of their segments the textile industry illustrates the case where total production has been relatively stable but important new segments within the industry have grown rapidly. These new segments comprise the man-made fibers which compete directly with cotton (still by far the largest in volume), wool, and silk. As a result, consumption of the last three fibers has declined relative to the total.

In the postwar years total fiber consumption has been maintained largely as a result of the expansion in the use of the synthetic fibers. These now account for more than a fifth of total consumption.

### *Strong demand for new household durables*

Included in the table of fast-growing industries are fifteen household durable goods. Some of these—washing machines, electric ranges, water heaters, and oil burners—were well established lines before World War II. Others were introduced just prior to the war when production was discontinued, so that all of their growth occurred in the postwar years.

Heading the list of fast-growing household durables is television. This industry accounted for nearly two-fifths of the factory value of shipments in 1951 for the household durables included in the table. The prospects for a continued high growth rate are clearly indicated when it is realized that the 108 sending stations now in operation serve only about one-half of the Nation's total population. The lifting of the television station freeze by the Federal Communications Commission in April 1952 will clear the way for the eventual construction of many new stations which will ultimately make television programs available on a Nation-wide basis.

Part of the high demand for household equipment is, of course, attributable to the high level of construction since the war. Warm-air furnaces and some other types of household equipment have thus been influenced by this factor as well as by the rising purchasing power which was a major factor in the increase in the general line of consumers' durable goods.